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ABSTRACT

Error Monitoring, a learning strategy designed to enable a student to detect and correct errors in written products, was taught to nine learning disabled (LD) adolescents. The instructional procedure involved an 11 step process including such procedures as describing the steps of the strategy, modeling the strategy, and student practice to criterion in both teacher generated and self generated passages. Results showed that students could detect and correct more errors after they received training. The error rate in their self generated products was especially low (close to zero) after training. Graphs of statistical data are offered, and monitoring strategy guidelines and record sheets are appended. (Author/SB)

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INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES
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Emphasis on Adolescents and Young Adults

ERROR MONITORING: A LEARNING STRATEGY FOR IMPROVING ACADEMIC PERFORMANCE OF LD ADOLESCENTS

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The University of Kansas Institute for Research in Learning Disabilities is supported by a contract (#300-77-0494) with the Bureau of Education for the Handicapped, Department of Health, Education, and Welfare, U. S. Office of Education, through Title VI-G of Public Law 91-230. The University of Kansas Institute, a joint research effort involving the Department of Special Education and the Bureau of Child Research, has specified the learning disabled adolescent and young adult as the target population. The major responsibility of the Institute is to develop effective means of identifying learning disabled populations at the secondary level and to construct interventions that will have an effect upon school performance and life adjustment. Many areas of research have been designed to study the problems of LD adolescents and young adults in both school and non-school settings (e.g., employment, juvenile justice, military, etc.)

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COOPERATING AGENCIES

Were it not for the cooperation of many agencies in the public and private sector, the research efforts of The University of Kansas Institute for Research in Learning Disabilities could not be conducted. The Institute has maintained an on-going dialogue with participating school districts and agencies to give focus to the research questions and issues that we address as an Institute. We see this dialogue as a means of reducing the gap between research and practice. This communication also allows us to design procedures that: (a) protect the LD adolescent or young adult, (b) disrupt the on-going program as little as possible, and (c) provide appropriate research data.

The majority of our research to this time has been conducted in public school settings in both Kansas and Missouri. School districts in Kansas which have or currently are participating in various studies include: Unified School District USD 384, Blue Valley; USD 500, Kansas City, Kansas; USD 469, Lansing; USD 497, Lawrence; USD 453, Leavenworth; USD 233, Olathe; USD 305, Salina; USD 450, Shawnee Heights; USD 512, Shawnee Mission; USD 464, Tonganoxie; USD 202, Turner; and USD 501, Topeka. Studies are also being conducted in several school districts in Missouri, including Center School District, Kansas City, Missouri; the New School for Human Education, Kansas City, Missouri; the Kansas City, Missouri School District; the Raytown, Missouri School District; and the School District of St. Joseph, St. Joseph, Missouri. Other participating districts include: Delta County, Colorado School District; Montrose County, Colorado School District; Elkhart Community Schools, Elkhart, Indiana; and Beaverton School District, Beaverton, Oregon. Many Child Service Demonstration Centers throughout the country have also contributed to our efforts.

Agencies currently participating in research in the juvenile justice system are the Overland Park, Kansas Youth Diversion Project, and the Douglas, Johnson, Leavenworth, and Sedgwick County, Kansas Juvenile Courts. Other agencies which have participated in out-of-school studies are: Penn House and Achievement Place of Lawrence, Kansas; Kansas State Industrial Reformatory, Hutchinson, Kansas; the U. S. Military; and Job Corps. Numerous employers in the public and private sector have also aided us with studies in employment.

While the agencies mentioned above allowed us to contact individuals and support our efforts, the cooperation of those individuals--LD adolescents and young adults; parents; professionals in education, the criminal justice system, the business community, and the military--have provided the valuable data for our research. This information will assist us in our research endeavors that have the potential of yielding greatest payoff for interventions with the LD adolescent and young adult.

Abstract

Error Monitoring, a learning strategy designed to enable a student to detect and correct errors in written products, was taught to nine learning disabled adolescents. The instructional procedures involved an eleven-step process including such procedures as describing the steps of the strategy, modelling the strategy, and student practice to criterion in both teacher-generated and self-generated passages. A multiple-baseline design across students was replicated three times. Results showed that the students could detect and correct more errors after they received training than they had detected prior to training. The error rate in their self-generated products was especially low (close to zero) after training. These results indicate that a specific instructional methodology can be effectively used to teach a learning strategy for monitoring errors in written material to learning disabled adolescents.

ERROR MONITORING: A LEARNING STRATEGY FOR IMPROVING ACADEMIC PERFORMANCE OF LD ADOLESCENTS

The field of learning disabilities is experiencing an increased demand for programs designed to serve learning disabled (LD) students in secondary schools. In response to this demand, several curriculum options have been developed (Deshler, Lowrey, & Alley, 1979). One of these options--the learning strategies model--has been the focus of much research and programming efforts in recent years (Alley & Deshler, 1979; Deshler, Alley, & Carlson, 1980; Schumaker, Deshler, Denton, Alley, Clark & Warner, 1981). As described by Alley and Deshler, a learning strategies approach is designed to accomplish the following goal: to teach learning disabled adolescents strategies that will facilitate their acquisition, organization, storage, and retrieval of information, thus allowing them to cope with the demands of the secondary curriculum. In short, this approach is designed to teach students "how to learn" rather than teaching specific content. For example, the teacher may teach the LD students techniques for clustering and organizing material that must be learned for a social studies test rather than actually teaching the social studies content. Furthermore, these same strategies can often be generalized across settings, contents, and time.

The thrust of the intervention research being conducted by The University of Kansas Institute for Research in Learning Disabilities has been the learning strategies intervention model. This programmatic research effort is designed to study not only underlying assumptions of this model but also to determine the power and robustness of specific learning strategies that are designed to facilitate the secondary LD student's ability to cope with the demands of the secondary school. Such strategies as self-questioning,

visual imagery, multipass (for reading comprehension), test-taking, and error monitoring are being studied. The purpose of this paper is to present data from one segment of this programmatic effort, error monitoring, as illustrative of the techniques being developed to impact the performance of the LD adolescent.

The specific learning strategies researched by The University of Kansas Institute for Research in Learning Disabilities must meet three basic conditions. First, they must have a high probability of helping the LD adolescent cope with the demands of the secondary setting. Second, they must address deficit areas found in a large proportion of the LD adolescent population. Third, they must be based on principles of cognitive psychology and learning. Error monitoring is considered to be an important learning strategy for LD adolescents because it meets these conditions. The remainder of this section will discuss error monitoring in relation to the three conditions stated above.

First, the curricular requirements of the secondary school place heavy written expression demands on students. Teachers expect students to take notes during class lecture and most assignments and tests require written expression (Moran, 1980). Students' written products are often judged as much for spelling and punctuation accuracy as for content (Cuthbertson, 1979). Consequently, students who have strategies to monitor errors in their work before submitting it to the teacher usually receive better grades. Another demand placed on students in secondary settings is to assume responsibility for their performances. Typically, junior and senior high school students do not have the close interaction with and supervision of teachers that they enjoyed in the elementary grades. In elementary school, many of the study assignments and reviews were conducted under the watchful eye of the

teacher. In these highly structured situations, teachers assumed much responsibility for monitoring errors on students' work. To succeed in secondary schools, students are expected to assume more responsibility for the correctness of their assignments. For many LD students, the absence of teacher assistance in such activites can prove devastating. In short, the demands of the secondary school require students to assume responsibility for more of their actions and performances, including the monitoring of errors in their written work.

Second, research on the characteristics of LD adolescents indicates that these students have deficits in monitoring errors in their performance. Alley, Deshler, and Warner (1979) found that LD specialists report that a deficit in monitoring errors in spelling occurs four times as often in learning disabled as in non-learning disabled students. To learn a skilled, highly integrated response and to perform in a competent, accurate, rapid, and expert fashion, one must respond to feedback data generated from one's own response and to external information. Siegel (1974) suggested that a faulty feedback mechanism in older learning disable students may impede their ability to act appropriately in social situations. Deshler, Ferrell, and Kass (1978) found that learning disabled high school students evidenced a monitoring deficit on academic tasks which required their detection of self-generated and externally-generated errors. On a creative writing task for example, LD students detected only one-third of the errors they committed. The repercussions of such performances in academic and future employment situations are obvious. The need to make LD adolescents aware of the quality of their performance in written work is evident.

Third, the important role of monitoring or the detection of errors in learning and performance is clearly documented in the psychological literature (Adams, 1971; Bilodeau, 1969; Powers, 1973; Welford, 1968). Powers, for example, maintained that much successful human behavior is oriented around the ability of the individual to use feedback information to monitor errors in his/her performance. Adams, in summarizing his research on error monitoring, stated ". . . knowledge of results is the foremost source of information which results in corrections that eventually lead subjects to a correct response. Thus, the monitoring of errors and the use of feedback information is a most critical variable controlling learning and performance" (p. 122). While significant attention has been given to error monitoring in psychology, much less emphasis has been given to this topic in the learning disability literature. Deshler (1974), in a review of the most frequently used text books in learning disabilities and special education, found only one that discussed the important role of error monitoring in learning and performance for LD students. Neglect of this topic is ironic given the significant problems that many LD students encounter in discriminating between correct and incorrect responses. Even the general education literature has not given major attention to strategies for error monitoring. That is, most instructional techniques that deal with error monitoring do not treat it as a primary instructional goal but rather as an incidental by-product of another intervention (Hamacheck, 1968; Laurita, 1972). Even less emphasis has been given to error monitoring as a learning and performance variable in the learning disability literature. This is unfortunate given the curricular demands for the skill, the monitoring deficits found in LD students, and the important role of monitoring as a learning and performance variable.

The purpose of this study, therefore, was to determine the effectiveness of teaching LD adolescents an error monitoring learning strategy. A specific instructional metnodology was used to teach students the new strategy. The student's ability to apply the strategy to both teacher-generated and self-generated written products was measured.

Method

Subjects

Nine secondary students, seven males and two females, participated. All nine students were being served in programs for learning disabled students. The students were selected after reviewing their school records and interviewing their LD teachers. Only those students who had IQ scores in the normal range (i.e., above 80), exhibited deficits in one or more achievement areas, and did not exhibit evidence of physical or sensory handicaps, emotional disturbance, or economic, environmental, or cultural disadvantage were asked to participate. Their parents were informed of the study procedures, and they signed consent forms. The participating students had IQ scores ranging from 88 to 117 ($\bar{x}$ = 99), grade level reading scores ranging from 3.9 to 8.0 ($\bar{x}$ = 6.2), and grade level writing scores ranging from 2.3 to 8.5 ($\bar{x}$ = 5.1). Their ages ranged from 12.5 to 18.0 years ($\bar{x}$ = 15.8 years) and they were in grades 8 to 12 ($\bar{x}$ = 10).

Learning Setting

The study took place in a classroom-like setting in a community center which had been converted from a school. Each student was seated at a desk or small table. The teacher circulated among the students to give them individual instruction and feedback. The teacher taught four or five students at a time.

Instructional Materials

The teacher was provided with a manual which contained a step-by-step description of the instructional procedures. Following these procedures, the teacher developed a set of instructional materials (hereafter referred to as "Teacher-generated materials"). These materials included handwritten, one-page passages into which the teacher inserted specific writing errors. In each passage, the teacher made five capitalization errors, five appearance errors, five punctuation errors, and five spelling errors. The teacher made two sets of these passages for each student such that the readability of one set of the passages was at the student's reading ability level and the readability of the other set was at the student's grade level. The teacher selected the passages from materials which had already been scored for readability[1], wrote the passages on lined notebook paper, inserted the specified errors, and xeroxed the pages.

Procedures

Instructional procedures. The instructional steps used by the teacher in teaching the monitoring strategy were adapted from those suggested by Alley and Deshler (1979) and Deshler, Alley, Warner, and Schumaker (1980). They were as follows:

Step 1: Test to Determine the Student's Current Monitoring Skills

In this step, the teacher tested the student's monitoring skills first in the teacher-generated materials at both ability and grade level and then in a passage written by the student him/herself. After testing was completed, the teacher discussed the results with the student, affirming that the student exhibited a deficit in the way he/she monitored for errors and, as a result, left a number of errors in his/her work.

Step 2: Describe the Error Monitoring Strategy

Next, the teacher described the steps involved in the Error Monitoring Strategy to the student and contrasted them with the student's current checking habits. The steps included the specific behaviors in which

the student should engage and the sequence of behaviors which should be followed. As each step was explained, a rationale was given for the behavior and how it would help the student to produce a better written product.

Step 3: Model the Strategy

In this step, the teacher modelled the Error Monitoring Strategy for the student. Thus, the teacher demonstrated the strategy by acting-out each of the steps previously described to the student while "thinking aloud" so the student could witness all of the processes involved in the strategy.

Step 4: Verbal Rehearsal of the Strategy

Here, the student verbally rehearsed the steps involved in the Error Monitoring Strategy to a criterion of 100% correct without prompts. This instructional step was designed to familiarize the student with the steps of the strategy such that he/she could instruct him/herself in the future as to what to do next when performing the strategy.

Step 5: Practice in Ability-Level, Teacher-Generated Materials

In this step, the student practiced applying the strategy to successive passages written at his/her current reading level. This reduced the demands on the student such that he/she could concentrate on the application of the new strategy. As the student became proficient in monitoring, he/she was encouraged to progress from overt self-instruction to covert self-instruction while practicing the strategy.

Step 6: Feedback

The teacher gave the student positive and corrective feedback after he/she completed monitoring each passage. When the student reached a criterion of detecting and correcting 90% of the errors in a given passage, the student went on to Step 7.

Step 7: Test on Teacher-Generated Passages

Here, the student received two tests in teacher-generated passages, one at ability level and one at grade level. These provided measures of each student's progress in learning the strategy. If the student reached criterion on the ability level test but not on the grade level test, Steps 5 and 6 were repeated using grade level materials. If the student reached criterion on both tests, the student progressed to Step 8.

Step 8: Individual Analysis of Common Errors

For this step, the teacher analyzed with the student the types of errors the student commonly was making in his/her own written work. For this purpose, the student and teacher used products the student had recently written. The result of this analysis was a list of the kinds of errors the student should be specifically careful to monitor. The list was secured in the student's notebook.

Step 9: Practice in Student-Generated Paragraphs

The student was instructed to write a paragraph and to apply the monitoring strategy to that paragraph.

Step 10: Feedback

Each time the student completed monitoring a new paragraph, the teacher gave the student positive and corrective feedback about his/her use of the monitoring strategy to detect and correct errors. Steps 9 and 10 were recycled until the student's final copy of a paragraph had fewer than one error for every 20 words.

Step 11: Test on Student-Generated Paragraph

The student was asked to write a paragraph and monitor that paragraph as a final test of the student's monitoring skills.

Error Monitoring Strategy Procedures. As described above, the student first learned to detect and correct errors in teacher-generated passages. For this purpose, the student followed these procedures:

1. Read each sentence separately.
2. Ask youself the COPS questions. (See description below.)
3. When you find an error, circle it and put the correct form above the error if you know the correct form.
4. Ask for help if you are unsure of the correct form.

The "COPS questions" were questions the students asked to cue themselves to look for four kinds of errors. These four categories of errors were devised after reviewing many samples of LD students' written work. An effort was made to minimize the number of categories while covering the largest number of errors the students were making. The "COPS" acronym, as part of the learning strategy, was chosen in light of the detecting and correcting activities involved in the strategy. The COPS questions and the errors for which the student looked were as follows:

C - Have I capitalized the first word and proper names?

O - How is the overall appearance? (Here the student looked for errors involving spacing, legibility, indentation of paragraphs, neatness, and complete sentences.)

P - Have I put in commas and end punctuation?

S - Have I spelled all the words right?

Each of these categories and the types of errors subsumed under each category were fully described to the students in the Describe Step (Step 2).

When the student began monitoring his/her own work, these steps were to be followed:

1. Use every other line as you write your rough draft.
2. As you read each sentence, ask yourself the COPS questions.
3. When you find an error, circle it and put the correct form above the error if you know it.
4. Ask for help if you are unsure of the correct form.
5. Recopy the paragraph neatly in a form for handing in to the teacher.
6. Re-read the paragraph as a final check.

Measurement Systems

Each of the categories of errors and each type of error within the four COPS categories was defined objectively (see Appendix). Scorers became familiar with these definitions and received two hours of scoring training. This training consisted of an explanation of the scoring procedures, practice scoring actual passages and paragraphs, and discussion and feedback after calculating reliability between scorers.

For teacher-generated passages, answer keys were provided. Thus, the scorers merely had to categorize and tally the errors the students detected and the errors which they accurately corrected. Interscorer reliability was

obtained by having two scorers independently score one randomly selected pre-test and one post-test at ability level and at grade level for each student. The scorers' tallies were compared category by category and occurrence reliability calculated by dividing the number of agreements by the number of agreements plus disagreements. The percentage of agreement was 91.6% for errors detected and 90.5% for errors corrected.

For the student-generated passages, the scorers first had to categorize and tally all the errors the student made in his/her rough draft. Then, the errors the student detected and corrected were also scored. These tasks were accomplished on a tally sheet whereby the errors the student made on each line of his/her paragraph were categorized and tallied (see Appendix). Two independent scorers scored one pre-test paragraph and one post-test paragraph for each student. Interscorer reliability was determined by comparing their tally sheets category by category. Again, occurrence reliability was calculated. The percentage of agreement was 81%.

Experimental Design

A multiple-baseline design across three students (Baer, Wolf, & Risley, 1968) was employed and replicated twice with two sets of three students each. The first student in each group of three students received only one set of pretests before instruction began. The second student received two sets of pretests and the third student received three sets of pretests.

Results

Figure 1 shows the pretest (baseline) results, the practice (or training) results and the post-test results for the first three students, S_1, S_2 and S_3, in teacher-generated passages. The percentage of errors detected is shown in the closed symbols and the percentage of errors corrected

is shown in the open symbols. The ability level (A.L.) test results are depicted with circles and the grade level (G.L.) test results are depicted with squares.

Before training, none of the students was correcting more than 25% of the errors in either ability-level or grade-level materials. Detection of errors was slightly higher than correction for S_2 and S_3. During training, S_1 required three practice passages, S_2 required six practice passages, and S_3 required three practice passages to reach the criterion of detecting and correcting 90% of the errors. Posttest results showed the students readily and immediately generalized their monitoring skills to the more difficult grade-level passages. All three students scored at or above criterion level for both ability- and grade-level posttests.

Figure 2 shows the results for the student-generated passages for the same three students. The dots show the number of errors per word the student made before monitoring his/her work. The circles show the number of errors per word remaining after the student checked his/her work. During baseline, S_1 was making and failing to correct one error for every three words in his paragraph, S_2 was making and failing to correct one error for every four words, and S_3 was making and failing to correct as many as one error for every two words. S_1 and S_2 required two practice paragraphs, and S_3 required only one practice paragraph before reaching criterion. On the final posttest, S_1 and S_2 had no errors in their final drafts, and S_3 had fewer than one error for every twenty words.

The results for the other six students are shown in Figures 3, 4, 5, and 6 and are very similar to the results from the first three students. None of the nine students required instruction in the grade-level materials. Most of the students required only three practices in teacher-generated

passages; six practices was the highest number required. Five of the students had one practice and four had two practices in student-generated paragraphs before reaching criterion.

The teacher time involved in the instruction was four hours of group instruction for the Describe and Model steps (Steps 2 & 3). Each practice on a teacher-generated passage took a student about 20 minutes with 5 to 10 minutes for scoring and feedback by the teacher. The individual analysis required about 20 minutes of teacher and student time. Each paragraph took about 30 to 35 minutes for the students to write and monitor and an additional 10 minutes for the teacher to score and give feedback. Thus, the average total amount of instructional time for a given student was about 7½ hours.

Discussion

The instructional procedures appear to be effective in teaching a learning strategy, specifically error monitoring, to learning disabled adolescents. Three replications of a multiple-baseline design across students demonstrated that improved performance did not occur until after each student received instruction in the strategy. All of the students showed marked improvement immediately following instruction in their first practice lessons. Only one student (S_2) had what was termed "difficulty" by the teacher in reaching criterion on the teacher-generated passages. When the lesson was couched as a "detection game" for this student, whereby the student could earn up to five points for the errors found and corrected in each of the COPS categories, the student improved quickly.

This study, unlike others reported in the literature on error monitoring, measured the effects of teaching a specific detection strategy to LD adolescents. While most previous research on error monitoring has focused on it as a learner characteristic, this study has demonstrated the efficacy

of a monitoring procedure to successfully improve the performance of LD adolescents in both teacher-generated and self-generated materials.

The instructional procedures involved in teaching this strategy appear to be practical in that instruction can be imparted in relatively few hours while insuring criterion level gains in a majority of LD students. This is especially true since the initial instruction can be accomplished in a group format. It is unclear, however, whether all of the instructional steps are necessary in teaching this strategy. Indeed, it may not be necessary to teach the strategy using teacher-generated passages first. The reasoning behind this tactic was: (a) to eliminate any emotional attachment to the material being monitored while the student was initially learning the strategy, and (b) to give the student experience monitoring a wide variety of errors. Most of the students were making idiosyncractic errors and there were not opportunities to make some errors given the structure of our test situation. For example, there were few opportunities for a paper to be torn or crumpled since each paper was given to the teacher immediately after it had been written. The teacher-generated passages allowed the student to be confronted with a torn paper and necessitated a discrimination of when a given tear constituted an error necessitating remediation.

One limitation of the procedures is that they have not been tested with students reading below the 3.9 grade level. The student in this study who had the widest discrepancy between actual grade level and current reading level was in the 10th grade and was reading at the 3.9 grade level. Thus, the procedures have not been tested with students exhibiting wider discrepancies. Nevertheless, the wide discrepancy did not seem to hinder the student in our study. In fact, when compared to the other students, she was one of the quickest learners of the strategy, requiring only four practices in all to learn the entire strategy.

Another limitation of the procedures is that the COPS categories are somewhat restricted. Only the most frequent kinds of errors committed by students doing relatively simple writing were included in the categories. The strategy is not intended to be a means of teaching the many subtleties and complexities of grammar and syntax. The use of the individual analysis step (Step 8) allows the teacher to identify idiosyncratic errors for each student which may not be specified in the COPS questions. Thus, the procedure does not preclude the identification and discussion of errors not included in the COPS categories.

A final consideration regards the problem of generalization. From the results of this study, it remains unclear how the procedures will impact the students' performances in the regular class. This study took place in the summer. Thus, there were no opportunities to collect products the students completed in other classes; our class was the only one in session. Current and future research is focusing on the students' use of the new strategies they have learned outside of the resource room environment.

In summary, this study has exemplified some of the intervention research on learning strategies currently being conducted by The University of Kansas Institute for Research in Learning Disabilities. Single-subject designs are being utilized to validate the effectiveness of a general teaching methodology across a wide variety of learning strategies. The strategy featured here, error monitoring, appears to be effectively used by learning disabled secondary students after training such that they can eliminate most, if not all, errors in their own writing. This skill, if properly used, should enable the learning disabled student to better respond to the demands of the secondary setting in light of the many instances of written work required in that setting.

Footnotes

[1]This teacher used 66 Passages to Develop Reading Comprehension and 88 Passages to Develop Reading Comprehension, by M. Gilmore, A. Sack, and J. Yourman, published by College Skills Center, 1250 Broadway, New York, to construct the teacher-generated passages. She used these materials because they contained a series of short, high-interest passages which had already been judged for readability. The readability of the passages in 66 Passages ranges from first to eighth grade and in 88 Passages ranged from sixth grade to college level.

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FIGURE 1

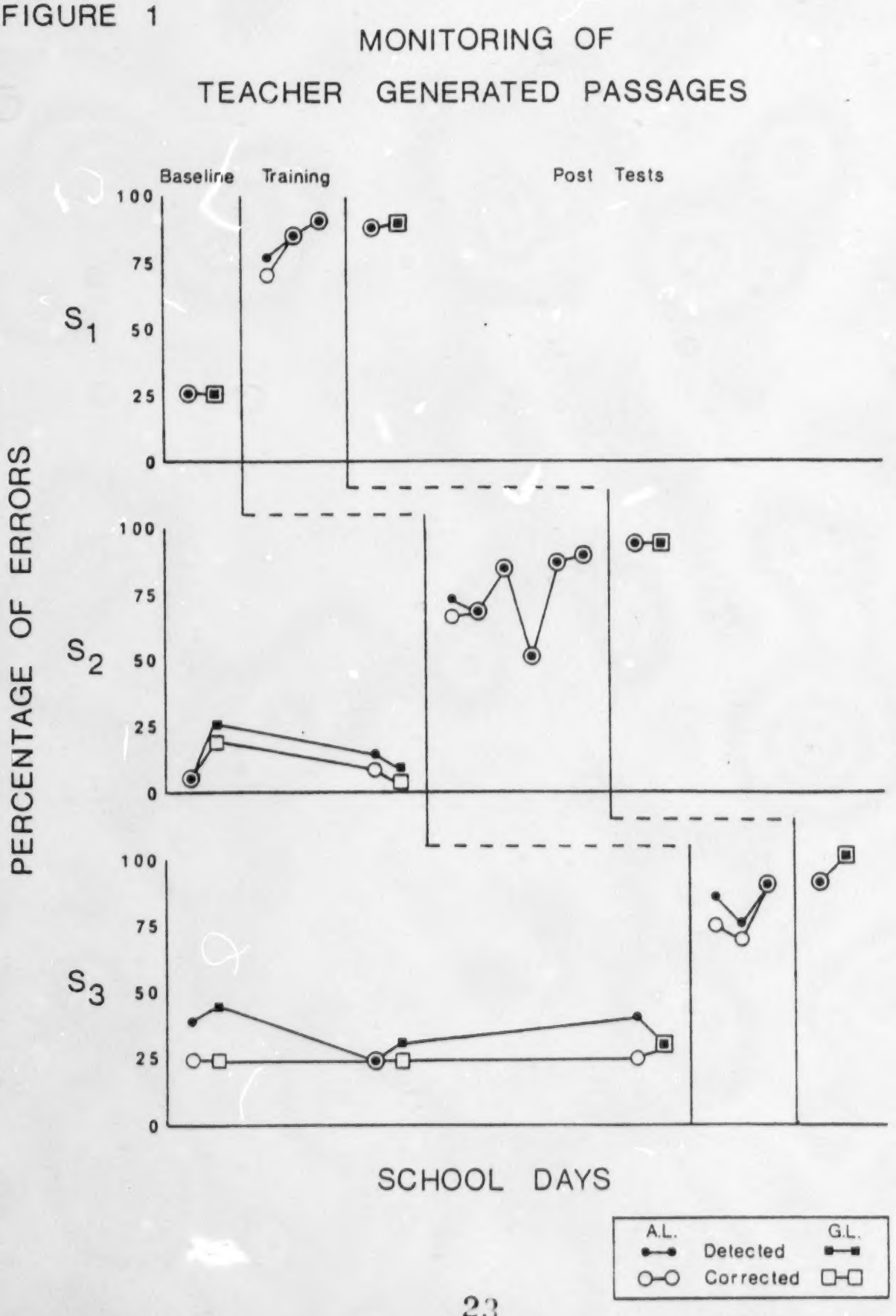

MONITORING OF
TEACHER GENERATED PASSAGES
Baseline
Training
Post Tests
100
75
50
25
0
S1
S2
S3
PERCENTAGE OF ERRORS
SCHOOL DAYS
A.L.
G.L.
Detected
Corrected

FIGURE 2

MONITORING OF

STUDENT GENERATED PARAGRAPHS

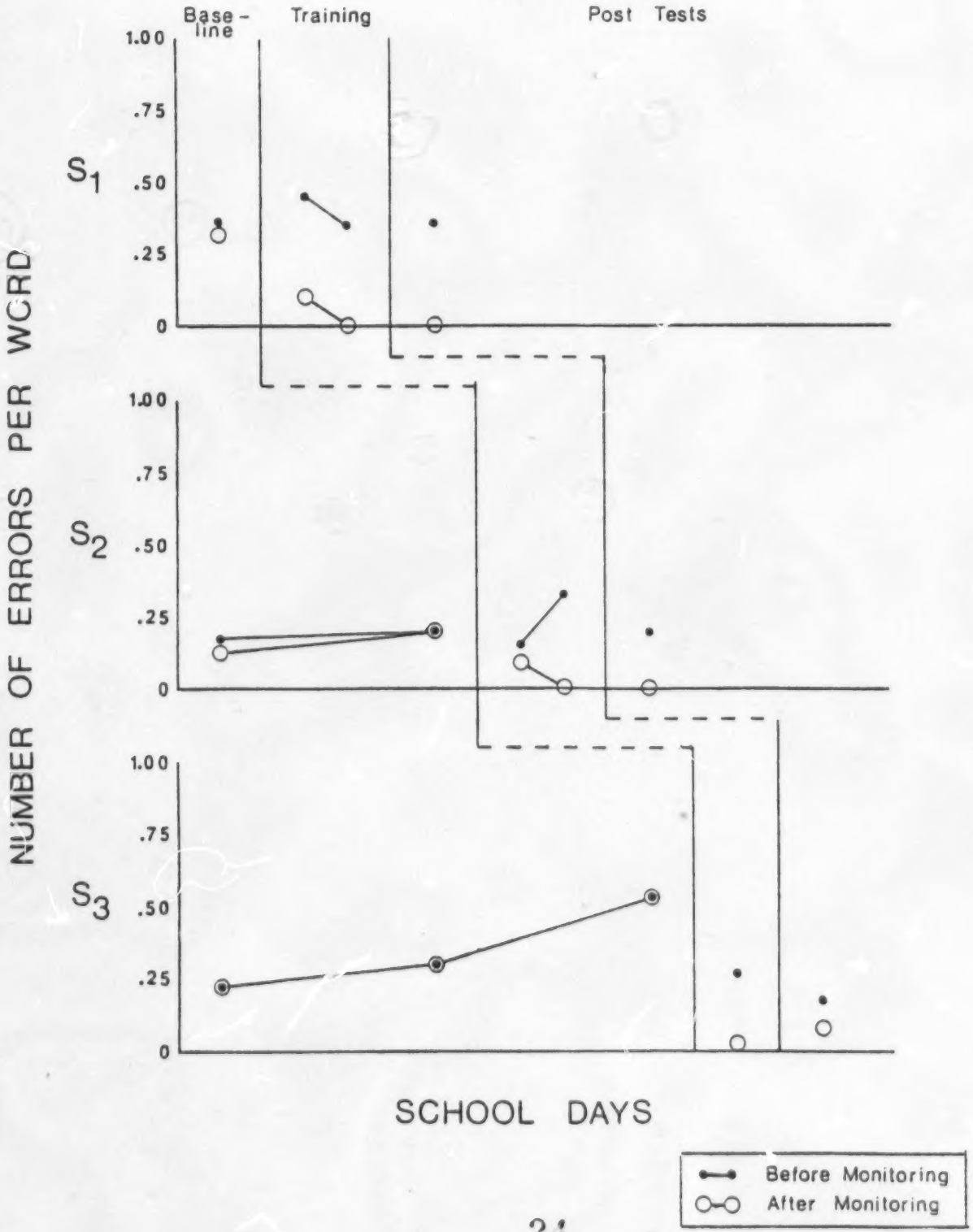
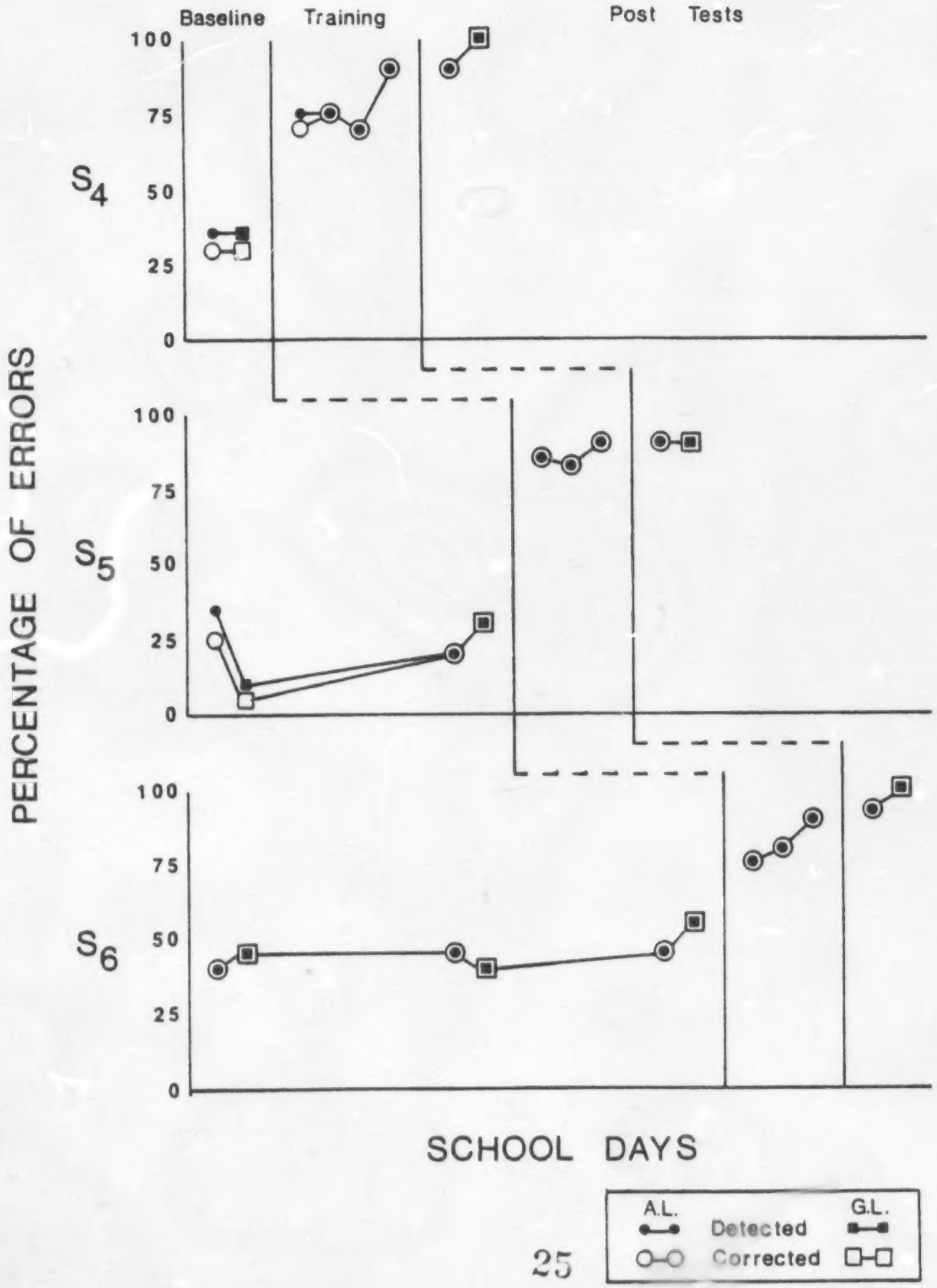


FIGURE 3

MONITORING OF

TEACHER GENERATED PASSAGES



25

FIGURE 4

MONITORING OF

STUDENT GENERATED PARAGRAPHS

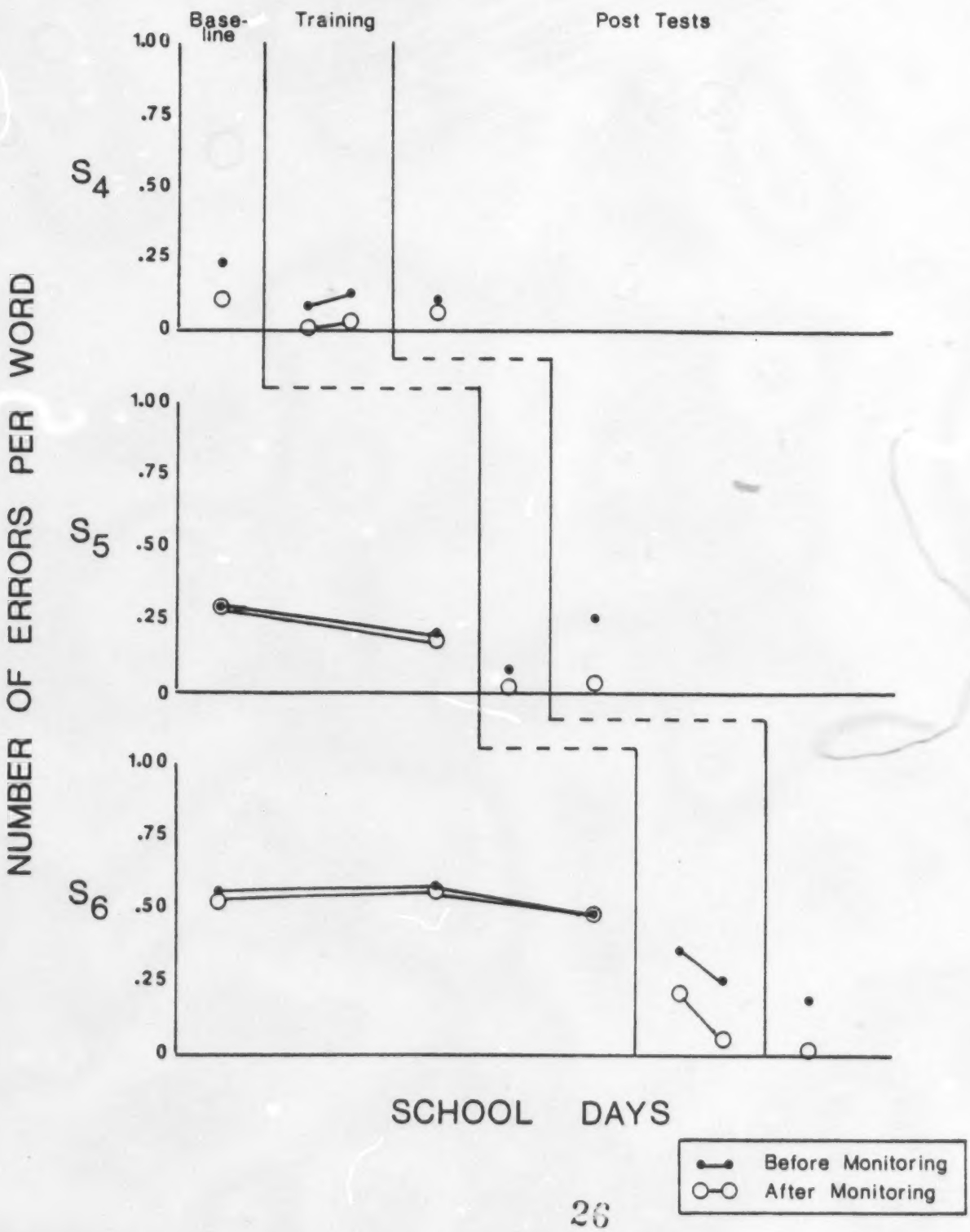


FIGURE 5

MONITORING OF

TEACHER GENERATED PASSAGES

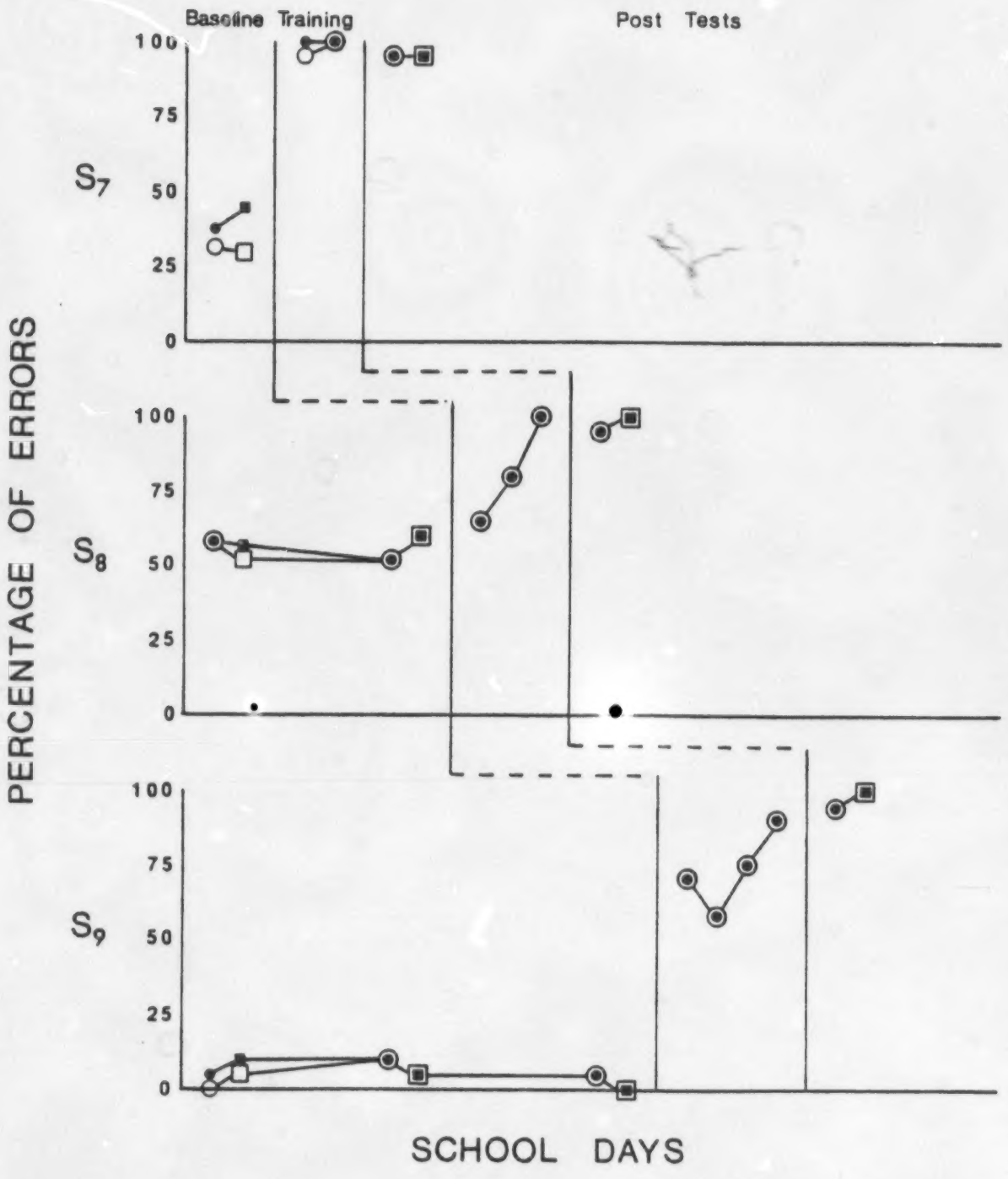
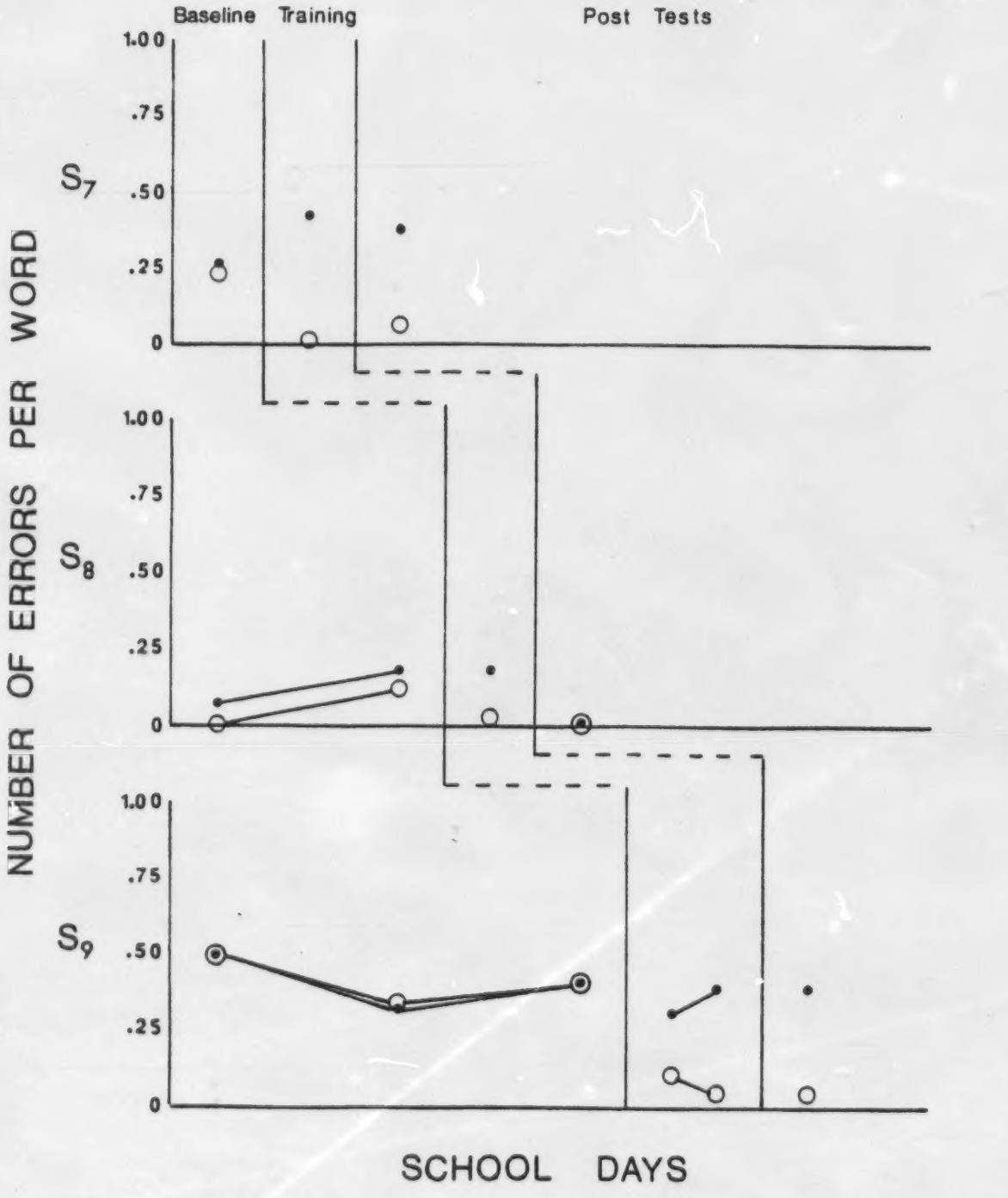


FIGURE 6

MONITORING OF
STUDENT GENERATED PARAGRAPHS



APPENDIX

MONITORING STRATEGY

Monitoring Evaluation Guidelines

A. Sub-test 1: Detecting and correcting errors in own writing.

Number each of the student's lines of writing by placing numerals in the left margin. Use Monitoring Checklist 1--Student Generated Paragraph by applying the following guidelines.

1. Spelling

Put one tally mark for each misspelled word under the appropriate line heading (line 1, 2, 3, etc.). Do not count a word as misspelled if it is the wrong usage of a word. If the word is spelled correctly as it appears, it should not be counted as misspelled. Spelling errors include letters inserted incorrectly, letters omitted, loops added within a word, and letter mixed up or letter order switched.

2. Capitalization

a. First word each sentence: Put one tally mark for each instance where a capital letter should have been used at the beginning of a sentence under the appropriate line heading. The beginning of a sentence is designated either by the first word of a paragraph or by an ending punctuation mark occurring immediately before the word. Do not count instances within run-on sentence category). In general, capital letters should either be larger than the lower case letters and/or be formed differently than their lower case letters. If it is formed differently than the lower case but is small, this is allowable as a capital letter. If you have doubts about a capital letter, look for other examples of that letter in the student's writing in either upper or lower case. If the letter is small and of the same form as a lower case letter, count it as an error.

b. Proper nouns: Put one tally mark for each instance where a capital letter should have been used with a proper noun under the appropriate line heading.

c. Improper usage: Put one tally mark under the appropriate line heading whenever a capital letter was used where it should not have been used.

3. Overall Editing and Appearance

a. Illegible: Read the first sentence of the paragraph and decide whether a student has an idiosyncrasy in his/her writing (e.g., does not close a particular letter). Make this adjustment as you read the paragraph. When you come to a word which is difficult to read, ask yourself these questions:

*Is the word difficult to read because it is spelled wrong (e.g., has an extra letter, extra loop that looks like an extra letter, substituted letters, mixed up letters)? If so, count this as a spelling error.

*Is the word difficult to read because of a writing idiosyncrasy? (Look at the rest of the writing sample to see if the problem occurs elsewhere.) Is so, do not count as an error.

*Is the word difficult to read because of a messiness error (e.g., write-over, crowding, etc. - see below). If so, count it as a messy error.

If none of the above are true, and the word cannot be deciphered with certainty if taken out of context, score one error under the appropriate line heading for illegibility.

b. Bad spacing: Three types of bad spacing can occur:

*With cursive handwriting, between words - when the student has no break in the writing stroke between two words.

*With printing, between words - when the student has left less than the space of one letter between two words.

*With both cursive and printing, within words - when the student has broken a word into two parts by having more than the space of a letter between the two word parts or by putting two word parts on different lines without using a hyphen. (If the latter error occurs, score the error as appearing on the first line).

For each of the above types of errors, tally one mark under the appropriate line heading.

c. Messy: Five types of messy errors can occur.

*Write-overs - the student has written a word more than once in the same place, resulting in a double or triple image. Note: This is not counted as illegible.

*Dirty erasures - the student has left a black mark or smudge by erasing a word or word part, or the paper has dirt smudges on it.

*Crowding - the student has crowded a word at the right end of a line or has crowded the letters within a word such that they touch/over-lap.

*Mark-outs - the student has crossed out a word

*Insertions - the student has drawn arrows or carets to indicate where a word should be inserted or has tried to insert a word between two regularly spaced words.

For each messy error that occurs, tally one mark under the appropriate line heading.

d. Rips: Three types of rips occur. They are:

*Torn paper - the student has ripped the paper in a line, has completely torn off a portion of the paper, or has left a hole in the paper during erasing.

*Frayed edge - The edge of the paper has been frayed either by tearing the paper off a pad carelessly or by allowing the paper to be worn down (e.g., by sticking out of a notebook).

*Torn holes - The three holes for notebook rings have been torn (counts as 1 error).

e. Indentation and margins: Tally one margin error under the appropriate line headings for each of the following errors:

*The first letter of the first word of a paragraph should start at least three spaces to the right of an imaginary line which can be drawn down the left edge of the majority of the lines of writing on the page. If these three spaces are not present, this is one error.

*The first letter of remaining lines should:

-- touch the margin line which appears on the left side of the paper

-- not overlap the margin line by more than ½ of a letter

-- be no more than one letter space to the right of the margin line.

For each line where these requirements are not met, score one error under the appropriate line heading.

f. Fragmented or run-on sentence: A sentence fragment is a phrase or part of a sentence which has been designated as a sentence by the student by using ending punctuation marks and/or capital letters which separate that phrase from other sentences. It may have a subject or a predicate but not both. A run-on sentence is a sentence which has more than two independent clauses and/or has more than two independent and one dependent clause. An incomplete sentence is one where one or more words have been left out of the sentence (there may be both a subject and a predicate). For each of these sentence structure errors, tally one mark in the "Total" box.

4. Punctuation

a. Ending of a sentence: Three errors can occur here:

*The end punctuation of a sentence is missing. You can tell that the student meant it to be the end of a sentence, because he/she used a capital letter to begin the next sentence. Note: Do not count as missing punctuation within a run-on sentence. This is scored as a run-on sentence error.

*The end punctuation of a sentence is wrong (e.g., a question mark is used where a period should have been used) or an end punctuation is inappropriately used within a sentence. No capital letter follows it.

Tally one mark under the appropriate line heading for each of the above errors which occurs.

b. Commas: Three types of errors can occur here:

*A comma has not been used to separate two items in a series of items. There should be a comma after each item in a series but the comma before the "and" in the series is optional. (e.g., "They bought ice cream, strawberries, cake and candles." are both correct). Do not count an omitted comma before the "and" in the series as an error.

*Another punctuation mark is used where a comma should have been used in a series.

*A comma is used as an ending punctuation mark (i.e., it is followed by a capital letter).

For each of the above comma errors, tally one mark under the appropriate line heading.

5. Additional Errors

When you notice a student making errors which are not included in the above guidelines, make a note of these errors on the back of the check list. Examples of errors which have not been covered are: word usage errors, tense errors, and noun/verb agreement errors, etc. Keep track of these additional errors to determine whether other types of errors should be emphasized in the monitoring package.

6. Double-Trouble Problems

There will be times when the same error can be counted in two different ways. For example, a word which looks like this - your - could be counted as a spelling error and as a messy error (a write-over). As a general rule, a single error should only be tallied once. Thus, with the conflict between a spelling error and a messy error, determine whether the word is spelled correctly elsewhere. If it is, count the error as a messy error. If it is

misspelled elsewhere, count it as a spelling error. If still in doubt, use this hierarchy of errors. Whenever you have a conflict on one error, count it as the highest order of the two conflicting errors:

Sentence Structure	- Highest
Spelling	- Next highest
Punctuation	- Middle
Capitalization	- Next to lowest
Appearance	- Lowest

This is an arbitrary hierarchy to help achieve reliability. There will be times when two different errors occur in the same word or even in the same letter. This is an appropriate time to count two errors. For example, the word, bankuet (banquet) has a spelling error (the k) and a smudge in different parts of the word. Count both errors. In another instance, the first word of a paragraph may not be indented and may also not be capitalized. Count both of these errors.

NAME _____ DATE ____/____/____

MONITORING CHECKLIST 1 TEST (circle one): PRE/POST/PRACTICE # _____

Complete this checklist. Transfer totals to Monitoring Checklist 2

STUDENT GENERATED PARAGRAPH

ERRORS	Line 1	Line 2	Line 3	Line 4	Line 5	Line 6	Line 7	Line 8	Line 9	Line 10	TOTALS
SPELLING											
CAPITALIZATION											
1. 1st word each sentence											
2. Proper nouns											
3. Improper usage											
OVERALL EDITING & APPEARANCE											
1. Illegible											
2. Bad spacing											
3. Messy											
4. Ripped, frayed, torn											
5. No indentation or margin kept											
6. Sentence fragment or run on											
PUNCTUATION											
1. Missing/wrong at end of sentence or improper usage within sentence											
2. Missing or improper usage of comma or wrong mark used where comma should be											
TOTALS 35											36

MONITORING CHECKLIST #2

NAME_____ ABILITY LEVEL_____ DATE___/___/___

GRADE LEVEL_____

CIRCLE ONE: PRE/POST/PRACTICE PASSAGE TITLE_____

NUMBER OF WORDS_____ _____

NUMBER OF SENTENCES_____

AVERAGE SENTENCE LENGTH_____

NON-ERRORS	ERROR	# POSSIBLE	DETECTED		CORRECTED	
			NO.	%AGE	NO.	%AGE
	SPELLING					
	CAPITALIZATION					
	OVERALL APPEARANCE					
	PUNCTUATION					
	TOTALS					

$$\frac{\text{NO. ERRORS BEFORE MONITORING}}{\text{TOTAL NO. WORDS IN PASSAGE}} = _____ \times 100 = _____$$

$$\frac{\text{NO. ERRORS LEFT AFTER MONITORING}}{\text{TOTAL NO. WORDS IN PASSAGE}} = _____ \times 100 = _____$$

DIRECTIONS: TALLY AND RECORD THE NUMBER OF WORDS, SENTENCES, AND AVERAGE SENTENCE LENGTH OF EACH PASSAGE. COMPUTE THE NUMBER OF POSSIBLE ERRORS BY REFERRING TO THE TEACHER'S CORRECTED VERSION. THEN, COUNT THE NUMBER OF ERRORS OF EACH TYPE THE STUDENT DETECTED. FIGURE THE PERCENT DETECTED. COUNT THE NUMBER OF CORRECTIONS APPROPRIATELY MADE. FIGURE THE PERCENT CORRECTED. COUNT AND RECORD THE NUMBER OF ERRORS INAPPROPRIATELY MARKED WHICH WERE NOT ERRORS. RECORD THESE IN THE FIRST COLUMN NEXT TO THE APPROPRIATE TYPE CATEGORY.